ARE "PAROLE FAILURES" PAROLEES WHEN THEY FAIL? INCORPORATING SUPERVISION TERMS AND THE TIMING OF ARREST EVENTS INTO PAROLEE RECIDIVISM RATES

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Abstract

Many studies have found that parolees experience high rates of recidivism after they are released to their communities. However, it is not clear whether these failures occur during the course of supervision or after the completion of the parole term. This study uses data from prison releases in a large Northeastern state from 2005 to 2007 (n = 28,869) and a three-year follow-up period to describe the timing of rearrest events as they relate to the term of active parole supervision. The findings indicate that about 63% of unconditional releases and 54% of parolees are rearrested within three years of their release. But approximately 55% of arrested parolees were rearrested after the completion of their supervision term. Parolees who were rearrested after parole completion differed significantly from those who were rearrested during the course of their supervision on several pertinent predictors of recidivism, including age, gender, ethnicity, instant offense type, and criminal history. Cox regression models indicate that when only arrests for parolees during the course of their supervision are considered, the impact of parole is associated with an approximate 22 percentage point decrease in the hazard rate when compared to a method that includes arrests that occur after the culmination of the supervision term. Our discussion presents the implications of different definitions of parolee failure for measuring recidivism rates as well as for criminal justice policy.

JUSTICE RESEARCH AND POLICY, Vol. 15, No. 2, 2013
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DOI: 10.3818/JRP.15.2.2013. 1

Several studies have explored the impact of parole supervision by analyzing the reoffense patterns of individuals released to either parole or no supervision. Attempts to isolate the impact of release status on recidivism typically employ some form of multivariate modeling to minimize selection biases inherent in discretionary parole release mechanisms (Gottfredson, Mitchell-Herzfeld, & Flanagan, 1982; Flanagan, 1982; Spivak & Damphousse, 2006; Spivak & Sharp, 2008; Ostermann, 2011a; Solomon, Kachnowski, & Bhati, 2005). Discretionary parole allows releasing authorities to select inmates who they think are likely to succeed if they were to be released early and supervised in the community. Studies have generally indicated that after controlling for differences between supervised and unsupervised groups, parole's impact upon recidivism is small and often nonsignificant (Ostermann, 2011a; Petersilia & Turner, 1993; Solomon et al., 2005).

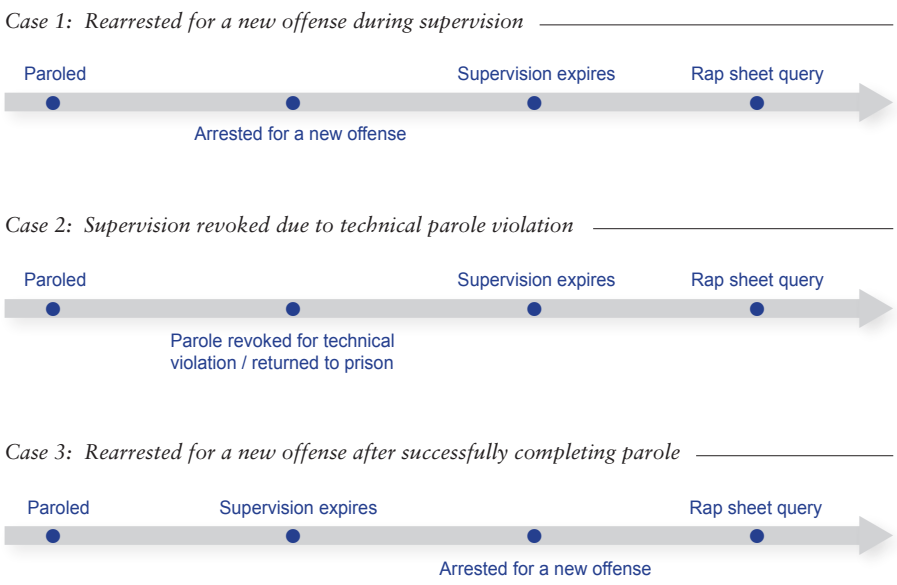
Previous research has typically not incorporated the time of active parole supervision into analytic strategies, however. Within these prior studies, former inmates who are released to parole supervision are identified as parolees when they have their rap sheets queried for reoffenses after the expiration of the study's follow-up period. New offenses that are indicated on rap sheets within the follow-up period are considered parole failures. While this method of identifying recidivists is convenient for researchers, it does not reflect the way that parole works in practice. Inmates who are released to parole are supervised until they either fail or meet the date of their sentence expiration. Without knowing the sentence expiration date, we cannot know whether those who were released to parole failed while they were under parole's watch or failed after they completed their parole term. Considering a more nuanced approach of measuring recidivism for parolees that incorporates the time of active supervision may have potentially significant impacts upon the measured rates of failure for supervised groups.

This study empirically explores the variability in rates of failure according to different measurement approaches. To illustrate how conceptualizations of parolee failure can differ, Figure 1 shows methods for measuring failure across three hypothetical parolees who experience recidivism (or potential recidivism) in different ways. All three cases are released to parole supervision, have their supervision terms expire on the same day, and have their rap sheets queried for reoffense information three years after their release from prison. Case 1 is rearrested after the parole date and prior to the parole expiration date. This case is considered a failure. Case 2 is not rearrested, but the terms of parole are revoked during the course of the supervision term and the individual is sent back to prison. This case can be considered a failure if parole revocations are considered recidivism events. Case 3 successfully completes the terms and conditions of parole supervision without incident and is rearrested after the parole term expiration. This case is considered a failure within the extant literature, and in studies that compare reoffense patterns between parolees and those who are unconditionally released from prison, this failure is attributed to the parole group (e.g., Flanagan, 1982; Jackson, 1983; Ostermann, 2011b). This attribution, however, does not coincide with how parole

functions in real world settings. These cases can also be characterized as individuals who were released to parole and successfully completed the parole term and failed subsequently rather than as parole failures in the literal sense.

Figure 1

Three Methods for Measuring Parolee Recidivism


Case 1: Rearrested for a new offense during supervision
Paroled
Supervision expires
Rap sheet query
Arrested for a new offense
Case 2: Supervision revoked due to technical parole violation
Paroled
Supervision expires
Rap sheet query
Parole revoked for technical violation / returned to prison
Case 3: Rearrested for a new offense after successfully completing parole
Paroled
Supervision expires
Rap sheet query
Arrested for a new offense

Recent research has indicated that considering the time of active supervision can have large impacts upon failure rate measures. Ostermann (2011a) demonstrated that if parolees were identified simply as individuals who were released to parole supervision and then had their reoffending patterns queried three years after their release, the differences in failure rates between parolees and unconditionally released inmates are a nonsignificant 1% after accounting for between-group differences through multivariate modeling. This finding was similar to that of previous research that used similar methods (Ostermann, 2011b). However, when three years of recidivism data were analyzed and the reoffense patterns of parolees who were assigned supervision terms of three years or more were compared to unconditionally released inmates, continuously supervised parolees were predicted to be a statistically significant 8% less likely to fail in the community after controlling for between-group differences (Ostermann, 2011a). Using a definition of recidivism that considered time under supervision, the effect size was approximately double that of previous studies that used similar methods of calculating recidivism (Ostermann, 2011b).

The present study further investigates the relationship between the timing of rearrest events and the period of active parole supervision through the exploration of four research questions:

1. What proportion of rearrested parolees are rearrested during parole supervision as opposed to after parole completion;
2. How do parolees who recidivate during parole supervision differ from those who successfully complete supervision and then later fail;
3. How are measures of parolee recidivism rates affected if we identify parole failure only during the course of active supervision; and
4. How is the impact of parole supervision affected if we identify parole failure only during the course of active supervision?

We examine three years of postrelease recidivism data from former inmates who were released from a large Northeastern state's prisons from 2005 to 2007 (n = 28,869) to address these questions. To explore the first research question, we incorporate the date on which an individual's supervision term expires into our follow-up time and compare this to the date on which the first rearrest after release occurs. We present results from t-test and chi-square analyses to address the second research question after grouping parolees according to whether they fail and whether this failure occurs during the course of supervision. To explore the third research question, we present different recidivism rates using different definitions of parole failure depending upon whether the failure occurred during the course of active supervision. These definitions for failure include: 1) a rearrest that occurs during the follow-up time regardless of the timing of active supervision; 2) a definition that replicates definition (1) but also includes parole violations as failures; 3) a rearrest that occurs between the release date and the date of parole completion; and 4) a definition that replicates definition (3) but also considers parole revocations as failures.

To further explore question three as well as the fourth research question, we construct a series of Cox proportional hazards regressions that isolate the impact of parole release in the presence of several other established predictors of recidivism. The models incorporate our various failure definitions and, after establishing baseline comparisons that incorporate the entire three-year follow-up period, allow for parolees who successfully meet the date of their parole completion without experiencing failure to be censored from additional follow-up.

The following section reviews the parolee recidivism literature. After discussing our methods and analytic strategy in further detail and presenting our results, we conclude the paper with a discussion of potential policy impacts if parolee failure is only considered for parolees who are under active supervision.

Parolees and Recidivism Rates

Studies that investigate the impact of parole supervision upon recidivism have not specifically addressed the influence of arrests that occur after parole discharge

upon parolee recidivism rates. Prior research typically compares reoffense patterns of former prisoners who are either released to parole or who are unconditionally released at the culmination of their court-imposed sentence. Within this literature, release cohorts have their official criminal justice records investigated and those who experience different release types have their rates of rearrest, reconviction, reincarceration, etc., compared after a prescribed time at risk has elapsed. Multivariate modeling is used to control for between-group differences for established predictors of recidivism such as age, race, gender, and instant offense types.

The largest and most comprehensive of these studies was performed by the Urban Institute (UI) and investigated recidivism patterns of a nationally representative sample of offenders released from prison in 1994 (Solomon et al., 2005). Using data from the Bureau of Justice Statistics' analysis of three years of recidivism data for 272,111 former inmates released across 15 states in 1994 (Langan & Levin, 2002), the UI investigated two years of recidivism data for offenders released to either discretionary or mandatory parole supervision, or to unconditional release. In an attempt to reflect the recidivism patterns of parolees who were likely to be on supervision, the investigators utilized a two-year follow-up period despite having access to three years of information. At the time that the individuals within their data were released, the average length of a parole supervision term was between 23 and 26 months (Hughes, Wilson, & Beck, 2001, as cited in Solomon et al., 2005, p. 18). However, this method does not try to identify whether recidivism occurred during or after active supervision and thus will include recidivism events of parolees both within and outside of their periods of supervision. After controlling for several between-group differences through regression modeling, the UI researchers found that approximately 61% of mandatory parolees and unconditionally released inmates were predicted to be rearrested within two years of their release, while approximately 57% of discretionary parolees were predicted to be rearrested.

State-specific investigations of the impact of parole supervision have used methods similar to those of the UI's national-level study (i.e., these investigations do not identify whether recidivism occurred during or after active supervision) and have found a similarly small impact of parole supervision upon recidivism patterns. Ostermann's (2011b) analysis of three years of recidivism data for inmates released across New Jersey in 2006 demonstrated that the likelihood of parolees experiencing a new arrest was approximately 57% compared to approximately 61% for unconditional releases after controlling for established predictors of recidivism. Additionally, parolees were predicted to be reconvicted at a rate of 51% compared to 58% for unconditional releases upon controlling for gender, marital status, risk scores, instant offense types, and the number of offenses for which the individual was incarcerated. The only study of the impact of parole that has used an experimental design found that 84% of those who were not supervised and 82% of those who were experienced a rearrest within a 26-month follow-up period (Jackson, 1983). Within this experiment, 72% of nonsupervised former inmates experienced a new conviction, while 71% of parolees were reconvicted (Jackson, 1983).

An earlier study (Flanagan, 1982) that analyzed five years of follow-up data from 5,312 male inmates released from prisons in a large Northeastern state in 1979 found that parole supervision provided for a minor increase in community tenure when compared to release without supervision. Flanagan (1982) demonstrated that parolees who failed in the community did so in an average of 29.8 months after release, while unconditionally released inmates who failed did so within an average of 29.1 months. Approximately 16.7% of parolees were readmitted to prison for a new crime during the follow-up period, and those who were unconditionally released at the culmination of their sentence were readmitted at a rate of 25.9%. Through the use of multivariate survival analysis, Flanagan (1982) controlled for prerelease differences in risk levels between group members according to release status. Findings suggested that within each level of risk, parolees failed at a slower pace than those who were released without supervision as well as those who were of similar risk levels to the parole group but were supervised within the community for a truncated period of time.

Sacks and Logan (1979, 1980) incorporate the time of active supervision within their recidivism analyses. In their series of studies, Sacks and Logan followed 57 adult males released to parole and 113 adult males unconditionally discharged from Connecticut prisons in 1973 and 1974. They found that within three years of release, 77% of parolees and 85% of unconditionally released inmates were reconvicted. The median time of parole supervision was eight months. The researchers computed average monthly failure rates for the 11 months prior to the cessation of an individual's parole term and compared this to the average monthly failure rate of the 11 months that occurred after the cessation of parole supervision. Their findings indicated that for the period the parolees were under active supervision, the average monthly failure rate was 3.6%, while after parole supervision had ceased and these former inmates were "living normal lives in the community," the average monthly failure rate was 6.4% (Sacks & Logan, 1980, p. 45).

Spivak and Damphousse's (2006) work exemplifies the effect that different failure definitions can have on parole's measured impact. In their study of Oklahoma prisoners released from 1985 to 1999, these researchers found that being released to parole versus unconditional discharge without supervision was associated with an approximate 10% increased hazard of being returned to prison. Within their analyses, the authors controlled for various established predictors of recidivism, including age, race, offense type, sentence length, security classification, and education level. The increased hazard was largely attributed to parolees being at risk of experiencing technical parole violations. Unconditional releases are de facto not at risk of experiencing these types of failures. Within Spivak and Damphousse's (2006) study, it was not clear whether returns to custody were actually results of technical infractions or new crimes and whether parolee failure events occurred during or after active supervision.

Ostermann (2011a) demonstrated the impact of considering two definitions of parolees upon the predicted recidivism rates of supervised versus unsupervised

groups over a three-year follow-up period. The first of his definitions considered parolees according to the traditional construct of recidivism, namely, those who are released to parole (regardless of being actively supervised or not), while the second considered parolees to be only those who are released to parole and who are actively supervised for the follow-up period under investigation. For these analyses, Ostermann (2011a) considered recidivism to be either an arrest for a new crime or a return to prison for a parole failure, so that technical parole violators who were reimprisoned during the follow-up period were not considered successes. This study found that if parolees were simply considered as individuals released to parole and they were followed for three years, the difference in their predicted rate of recidivism when compared to unconditional releases was a nonsignificant 1% after controlling for several established predictors of recidivism. However, if only parolees who were assigned to be supervised for a minimum of three years were considered parolees, 57% of parolees were predicted to fail compared to 65% of unconditionally released inmates. This difference of 8 percentage points was statistically significant (Ostermann, 2011a).

The present study addresses critical, yet unexplored, questions that were not clearly addressed in Ostermann's (2011a) prior research. These questions center around the timing of rearrest events and how they relate to the timing of active supervision. Despite demonstrating that parole supervision can have a large impact upon recidivism rates and that research that does not incorporate the time of active supervision may inflate parole failures, Ostermann's (2011a) previous work did not specifically address the influence of arrests that occur after parole discharge upon recidivism rates. This study describes this impact by presenting several different definitions of parolee failure and demonstrating how their use influences the measurements and interpretations of recidivism rates.

Data and Methodology

Data for this study were gathered at a State Parole Board (SPB) in a large Northeastern state. The researchers used the SPB's information systems to build a database that contained individuals who were released from the state's prisons from 2005 to 2007 (n = 31,831). From this database, we omitted those who either had missing information about the date on which their parole term expired or were statutory supervision cases (n = 2,962). Our final database contained 18,944 discretionary parolees with unique supervision periods and 9,925 unconditionally released inmates who were not supervised by the parole board after their release. The SPB's data system was used to attach demographic, instant offense, and revocation information to each case, and we used an existing data abstract between the SPB and the State Police to attach arrest data to each case. This was accomplished by matching each former prisoner's unique State Bureau Identification Index number to the State Police Computerized Criminal History (CCH) system. Arrest events

that occurred prior to an individual's release date were considered criminal history and arrest events that occurred after the release date were considered recidivism. Within our analyses, we only considered the primary arrest event that occurred after the individual's release from prison and only considered rearrests as recidivism if they occurred within three years of the individual's release date.

A term of supervision was constructed for each parolee by comparing the date on which the individual's sentence expired to the date on which the individual was released to parole supervision. If a parolee was rearrested during the follow-up period, we compared the arrest date to the date of sentence expiration to ascertain whether the failure event occurred during the individual's parole term or after the expiration of the term. We also determined whether parolees had their supervision term revoked for a technical violation prior to meeting their parole completion date. This allowed us to explore whether parolees who are rearrested after their parole completion date had successfully completed the terms and conditions of their supervision without incident, or if they spent a part of the follow-up period not at risk due to reimprisonment stemming from parole revocation.

It should be noted that the measures of parole revocations and rearrests we use are mutually exclusive. The parole board designates and clearly labels parole revocations as occurring because of either a technical infraction or a new crime. Technical violations include serious or persistent noncriminal infractions of the terms and conditions of parole supervision (e.g., disobeying curfew requirements, changes of address without parole officer approval, missing appointments, failing community programs, etc.) and are not considered new arrests within the state's CCH system. Alternatively, new crimes (arrests) are reported within the CCH system. We only considered revocations as such if they stemmed from technical parole violations. Revocations stemming from new arrests are captured within our data abstract of the CCH system. Ultimately we analyze rearrests as well as a combined measure of rearrests or parole revocations because previous studies that have used returns to custody as their measure of recidivism have found that parolees can be at an increased hazard of failure relative to other release groups due to being at risk of experiencing technical parole violations (see Spivak & Damphousse, 2006).

Our bivariate analyses include *t*- and chi-square tests to investigate between-group differences in means and proportions for supervised and unsupervised former inmates, parolees who were and who were not rearrested during the follow-up period, and for those parolees who were rearrested, differences between those who failed during and those who failed after the expiration of the parole term. To further address the second research question, we present different recidivism rates for parolees using a three-year follow-up period after analyzing the timing of the failure event as it relates to the active supervision period. To address the third research question, we present an analysis of whether a rearrest was experienced by an individual who was released to parole within the follow-up time as well as an analysis that considers parole revocations as well as arrests as failures. We then replicate these analyses but only consider parole failures as those who experience a recidivism

event (i.e., an arrest or a combined measure of an arrest or a parole revocation, whichever occurs in closest temporal proximity to release) during the course of their active supervision. We also analyzed recidivism rates for unconditionally released inmates in order to provide baseline comparisons for the supervised group.

The fourth research question is addressed through a series of four Cox regression models that incorporate our various failure definitions and allow for different censor events to take place for the supervised group. Within the models we control for several established predictors of recidivism (e.g., age, male, race, risk score, number and type of instant offenses, and prior arrests) and include a "released to parole supervision" indicator as our independent variable (parole = 1, unconditional release = 0). Within the first two models, we consider any rearrests (Model 1) or any rearrests or parole revocations (Model 2) taking place within three years of release as failure. These models serve as baseline evaluations of the impact of being released to parole and do not incorporate the timing of active supervision and whether the failure events take place during the course of supervision.

Within the last two models, we consider arrests (Model 3) and arrests or parole revocations (Model 4) only if they occur during the course of parole supervision. For parolees who do not experience failure during the period of supervision within these two models, the date on which they successfully complete parole supervision serves as their censor date. This strategy allows for the comparison of parole's impact according to different definitions of parole (i.e., under active supervision or simply released to parole) and failure (i.e., new crimes or new crimes and revocations) while holding other predictors of recidivism constant. Throughout the four models, unconditionally released inmates are censored at either their date of arrest or at the culmination of the three-year follow-up period if no rearrest is experienced.

Results

Bivariate Analyses

Table 1 presents descriptive statistics as well as results from binary analyses for all unconditionally released inmates (n = 9,925) and parolees (n = 18,944) released from the state's prisons from 2005 to 2007. The parole group is disaggregated according to whether parolees were (n = 10,181) or were not (n = 8,763) rearrested during the three-year follow-up period, and for those who were rearrested, whether the arrest happened during (n = 4,477) or after (n = 5,704) the parolee's discharge from supervision. On average, parolees were approximately 35 years of age, about nine out of 10 were male, and about 61% were black. Unconditionally released inmates significantly differed from parolees, with an average age of about 36 (t = 12.3, $p < .001$) and a 93% male ($\chi^2 = 5.9$, $p < .01$) and a 57% black representation ($\chi^2 = 12.7$, $p < .001$). Parolees were classified as significantly lower risk when compared to unconditionally released inmates, with approximately 37% of parolees and 32% of unconditional releases classified as being moderate risk on a prerelease

Level of Service Inventory-Revised (LSI-R) assessment ($\chi^2 = 46.7$, $p < .001$). Parolees had an average score of about 23 and unconditional releases had an average score of about 25 ($t = 23.0$, $p < .001$). About 11% of parolees and about 19% of unconditional releases were classified as high risk ($\chi^2 = 280.2$, $p < .001$), while about 15% of parolees and 8% of unconditional releases were classified as low risk ($\chi^2 = 208.0$, $p < .001$). Almost half of the parolees, compared to about 40% of unconditional releases, were serving prison sentences for drug-related crimes ($\chi^2 = 72.8$, $p < .001$). On average, parolees were arrested about eight times prior to their release compared to about 10 times for unconditional releases ($t = 23.9$, $p < .001$). Parolees were supervised for about 1.4 years upon their release from prison.

More than half of the parole population and more than 60% of the unconditionally released population were rearrested within three years ($\chi^2 = 348.9$, $p < .001$). Almost a quarter of those released to parole had their supervision revoked due to technical infractions. Of those parolees who were rearrested, 56% were rearrested after their supervision term expired, with the remaining 44% experiencing their arrest during the course of their supervision. On average, parolees were rearrested within 434.7 ($SD = 302.7$) days of release from prison. Parolees who were rearrested after their supervision term experienced their new arrest within an average of 566.9 ($SD = 290.6$) days. Parolees who were rearrested during the course of their supervision experienced this event within an average of 263.3 ($SD = 220.5$) days of their release from prison. For those who were rearrested after their parole term expired, the average time between the completion of their parole term and their arrest was 281.5 ($SD = 225.1$) days.

Parolees who were rearrested during the follow-up time were significantly younger ($t = 23.2$, $p < .001$), were more likely to be male ($\chi^2 = 90.6$, $p < .001$), and were more likely to be black ($\chi^2 = 419.8$, $p < .001$) when compared to parolees who were not rearrested. These parolees had significantly higher average LSI-R scores ($t = -28.8$, $p < .001$) and were more likely to be considered high risk than parolees who were not rearrested. Rearrested parolees were significantly more likely to be drug offenders ($\chi^2 = 20.9$, $p < .001$), were less likely to be violent offenders ($\chi^2 = 15.3$, $p = .000$), had more prior arrests ($t = -33.5$, $p < .001$), shorter average periods of parole supervision ($t = 20.9$, $p < .001$), and were more likely to have their supervision revoked prior to completion ($\chi^2 = 834.9$, $p < .001$). Parolees who were rearrested after the expiration of their parole term were significantly older ($t = -11.3$, $p < .001$), were less likely to be male ($\chi^2 = 16.9$, $p < .001$), and were less likely to be black ($\chi^2 = 4.9$, $p = .026$) when compared to parolees who were rearrested during the course of their supervision. Those who were arrested after their parole term were more likely to be property ($\chi^2 = 5.7$, $p = .017$) and drug ($\chi^2 = 53.9$, $p < .001$) offenders and were less likely to be classified as violent offenders ($\chi^2 = 91.7$, $p < .001$) when compared to parolees who were rearrested prior to the expiration of their parole term. This group had significantly more prior arrests ($t = -4.4$, $p < .001$) and were supervised for significantly shorter periods of time ($t = 47.5$, $p < .001$) when compared to parolees rearrested during supervision.

Table 1

Bivariate Analyses: Former Prisoners and Arrest Timing

	Unconditional Releases (n = 9,925)	All Parolees (n = 18,944)	Parolees: No Rearrest (n = 8,763)	Rearrested Parolees (n = 10,181)	Parolees Rearrested During Supervision (n = 4,477)	Parolees Rearrested After Discharge (n = 5,704)	Significance		
							Supervision yes/no	Parolees: Rearrested yes/no	Parolees: Rearrested prior/post
Age	36.3	34.9 (9.4)	36.5 (9.8)	33.4 (8.7)	32.3 (8.5)	34.3 (8.8)	***	***	***
% Male	92.5	91.6	89.6	93.4	94.6	92.5	*	***	***
% Ethnicity									
Black	57.4	60.9	52.8	67.8	68.4	67.3	***	***	*
White	19.1	19.3	22.0	16.9	17.1	16.7	--	***	--
Hispanic	14.8	19.2	23.9	15.0	14.2	15.7	***	***	--
Other	0.4	0.8	1.3	0.3	0.3	0.3	***	***	--
LSI-R score	25.1	22.9 (6.2)	21.5 (6.5)	24.2 (5.6)	24.1 (5.7)	24.2 (5.7)	***	***	--
% Risk level									
Low	7.7	14.9	22.2	8.8	9.4	8.4	***	***	--
Moderate	31.8	36.7	38.0	35.6	35.9	35.4	***	***	--
Medium	41.4	37.7	31.9	42.4	41.5	43.1	***	***	--
High	19.1	10.8	7.8	13.2	13.2	13.1	***	***	--
% Instant offenses									
One	37.1	40.0	45.6	35.2	32.3	37.5	***	***	***
Two	27.2	28.2	27.7	28.6	28.7	28.5	--	--	--
Three	15.9	14.7	12.7	16.5	16.4	16.5	**	***	--
Four or more	19.8	17.1	13.9	19.7	22.6	17.5	***	***	***

continued

Table 1: Bivariate Analyses: Former Prisoners and Arrest Timing, *continued*

	Unconditional Releases (n = 9,925)	All Parolees (n = 18,944)	Parolees: No Rearrest (n = 8,763)	Rearrested Parolees (n = 10,181)	Parolees Rearrested During Supervision (n = 4,477)	Parolees Rearrested After Discharge (n = 5,704)	Significance		
							Supervision yes/no	Parolees: Rearrested yes/no	Parolees: Rearrested prior/post
% Instant offense type									
Public order	3.5	2.7	2.9	2.5	2.6	2.5	***	--	--
Property	19.3	14.8	14.2	15.4	14.4	16.1	***	*	*
Drug	43.3	48.7	46.8	50.4	46.2	53.6	***	***	***
Sex	1.0	1.5	2.3	0.7	0.6	0.8	**	***	
Violent	32.9	32.3	33.7	31.1	36.2	27.0	--	***	***
Prior arrests	9.8 (7.7)	7.8 (6.2)	6.2 (5.4)	9.2 (6.5)	8.8 (6.7)	9.4 (6.4)	***	***	***
% Rearrested	63.3	53.7	--	--	--	--	***	--	--
% Revoked	--	23.5	13.9	31.8	46.5	21.8	--	***	***
Time to rearrest (days)	322.9 (277.7)	434.7 (302.7)	--	--	263.3 (220.5)	566.9 (290.6)	***	--	***
Supervision term (days)	--	512.9 (467.0)	588.7 (532.5)	447.8 (390.6)	635.6 (476.1)	300.4 (212.3)	--	***	***

Note. Supervision yes/no = comparisons between former prisoners who were (= 1) and were not (= 0) released to parole supervision.
Rearrested yes/no = comparisons between parolees who were (= 1) and who were not (= 0) rearrested during the follow-up time.
Rearrested prior/post = comparisons between parolees who were rearrested after the expiration of (= 1) or during their parole term (= 0).
Standard deviations are presented in parentheses. Rearrests are considered only if they occurred within three years of release.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Parolee Recidivism Rates

Table 2 presents unconditionally released inmate and parolee recidivism rates over the course of one, two, and three years according to different definitions of failure. Within one year of release, 41.6% of unconditional releases and 25.5% of those who were released to a parole status were rearrested; these rates increased to 56.3% and 42.5% after two years and 63.3% and 53.7% after three years. When considering a parole violation or a rearrest as failure, parolees fail at rates of 33.8%, 50.3%, and 60.2% within one, two, and three years, respectively, of release from prison. These rates are drastically reduced if parolees are only considered as parole failures when they are actively being supervised. Under this definition, within one year 17.0% of parolees fail, within two years this rate increases to 21.8%, and within three years this rate increases to 23.6%. If parole revocations are also considered failures, 26.5%, 33.1%, and 36.2% of parolees fail during the course of their active supervision.

When comparing rates that use similar failure criteria by whether the timing of the event occurs during the course of active supervision or not, the rate differences are very high. Within one year of follow-up time, the rate of parole failure differs by about 8.5 percentage points when considering rearrests that either do or do not occur during the course of active supervision. After three years, this rate difference is approximately 30 percentage points. When considering both rearrests and parole revocations as failures, the rate difference within one year of follow-up time is about 7.4% when taking the timing of the failure event into account. Within three years, this rate difference is approximately 24 percentage points.

Table 2

Proportion of Former Inmates Who Experience Recidivism Using Different Failure Definitions

	Unconditional Releases	*Parolees*			
	Rearrested Within Three Years	Rearrested Within Three Years	Rearrested or Parole Violated Within Three Years	Rearrested During Parole Supervision Term	Rearrested or Parole Violated During Parole Supervision Term
1 year	41.6	25.5	33.8	17.0	26.5
2 years	56.3	42.5	50.3	21.8	33.1
3 years	63.3	53.7	60.2	23.6	36.2

Note. Rearrests are for new offenses. Parole violations are for technical violations that result in a revocation of the parole term.

Parole's Impact According to Different Definitions of Recidivism

Results from our four Cox regression models are presented in Table 3. All four models were statistically significant better fits to the data when compared to constant-only models. While the control variables across the four models exemplified similar statistical significance and effect sizes, the impact of parole supervision was substantially different according to the type of failure and the window of time

Table 3

Hazard Ratios from Cox Regressions: Parole Supervision's Impact According to Different Failure Definitions

	Model 1	Model 2	Model 3	Model 4
	Any rearrest within three years	Any rearrest or parole revocation within three years	Rearrest during parole supervision	Rearrest or revocation during parole supervision
Age	0.957***	0.964***	0.955***	0.965***
Male	1.423***	1.365***	1.531***	1.412***
Race				
White	0.776***	0.819***	0.755***	0.810***
Hispanic	0.710***	0.738***	0.716***	0.749***
Other	0.449***	0.444***	0.482***	0.430***
Black (ref.)	--	--	--	--
LSI-R score	1.028***	1.038***	1.024***	1.042***
Number of instant offenses				
One	0.870***	0.914***	0.815***	0.920***
Two	0.973	0.996	0.946*	1.009
Three	0.996	1.009	0.950	1.004
Four or more (ref.)	--	--	--	--
Offense type				
Public order	1.080	1.051	1.117	1.104
Property	1.128***	1.130***	1.108***	1.164***
Drug	1.055**	1.032	1.019	1.039
Sex	0.672***	0.676***	0.522***	0.606***
Violent (ref.)	--	--	--	--
Prior arrests	1.053***	1.048***	1.051***	1.045***
Parole supervision	0.723***	0.934***	0.505***	0.874***
Model statistics				
Log likelihood	-125,316.55	-135,628.36	-72,563.722	-90,759.712
Sig.	***	***	***	***

Note. For models 3 and 4, parolees who are not rearrested and/or revoked during their supervision term are censored on the date that they successfully complete parole supervision.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

(i.e., over the course of three years or only during active supervision) for which these failures were considered. For example, parole supervision, as opposed to unconditional release, was associated with a 27.7% decreased hazard of rearrest within three years of release (HR = 0.723, $p < .001$), and when both rearrests and parole revocations were considered failures, parolees were at a 6.6% decreased hazard of failure when compared to those who were not supervised after release. If failures of parole were only considered if they occurred during the course of active parole supervision, parole supervision was associated with an approximate 50% decreased hazard of rearrest (HR = 0.505, $p < .001$). If parole revocations were also considered failures, parolees were at an approximate 12.6% decreased hazard of failure (HR = 0.874, $p < .001$) relative to those who were unconditionally released at the end of their prison sentence.

Discussion

Impacts on Parolee Recidivism Rates

We found that a substantial proportion of the reintegrating population that is released to parole is rearrested within three years of release, but most of these rearrested parolees experience these events after they are no longer under parole supervision. Those who were rearrested after the expiration of their supervision term had significantly shorter supervision periods when compared to those who were rearrested prior to the expiration of their term and also had a significantly greater number of prior arrests. Surprisingly, actuarial risk scores did not significantly differ between these groups of parole failures. This likely indicates that our findings are largely reflections of the management of the risks and needs of the parolees within our study rather than the actual risks and needs of the individuals (Andrews, Bonta, & Hoge, 1990; Andrews, Bonta, & Wormith, 2006: Lowenkamp & Latessa, 2004, 2005; Lowenkamp, Latessa, & Holsinger, 2006; Lowenkamp, Pealer, Smith, & Latessa, 2006).

Upon further examination of parolees who were rearrested after their parole expiration date, we found that 78.2% ($n = 4{,}460$) were not revoked for technical parole violations during the course of their supervision. This means that when looking at three years of follow-up data, approximately 44% of the arrested parolee population successfully completes the terms and conditions of their supervision and then goes on to fail after the maximum expiration of their sentence. This finding can likely have substantial impact upon the measurement and reporting of parolee failure statistics. We found that 53.7% of the parolees who were released from the state's prisons from 2005 to 2007 were rearrested within three years. But if we only consider parole failures to be individuals who were rearrested during the course of their supervision, the recidivism rate for parolees would be 23.6%. If we define recidivism as either a new arrest that occurs during supervision or a revocation of parole, the parolee recidivism rate would be 36.2%. While the

overall rearrest rate for inmates released to parole is similar to that found in previous studies, employing an analysis of the reoffense patterns of parolees by limiting recidivism events only to those that occur during active supervision provides for very different recidivism rates than what have been traditionally calculated within the extant literature (e.g., Solomon et al., 2005; Ostermann, 2011b).

Within all of the survival models parole, in its various forms, was associated with a statistically significant decreased hazard of failure when compared to unconditional release. While this effect varied considerably according to whether active supervision was incorporated into the measure or not, this finding likely indicates that parole can have a positive cumulative effect upon some individuals that goes beyond the period of active supervision. Substantial shifts in the effects of parole were also apparent when different failure definitions were incorporated into our multivariate Cox regression models. For example, the hazard rate for parolees decreased by about 22 percentage points (HR = 0.505 versus HR = 0.723) depending on whether any rearrests that occurred within three years of release were considered or only those rearrests that occurred during active supervision were considered. When parole revocations were included within the failure criteria, the hazard rate decreased by about 6 percentage points (HR = 0.874 versus HR = 0.934). These analyses further exemplify how different definitions of failure can dramatically impact our understanding of the effects of parole release and/or parole supervision and about the long-term positive cumulative impact parole has upon those who are transitioned from prison through a period of supervision. Depending on how one conceptualizes parole, and what constitutes parole failure, the reported impact of parole can vary dramatically. Using the methods that better reflect how parole actually works (i.e., those that incorporate active supervision) demonstrates a larger positive impact of parole upon reoffense patterns.

These data indicate an apparent mismatch between follow-up periods used in studies that attempt to explore the impact of parole supervision and the actual periods of supervision to which parolees are assigned. While three years is a common follow-up time within this literature, most parolees are not supervised for such an extended period. Parolees within this study were supervised for an average 1.4 years. About 20% of the parole population was supervised for less than six months and about 40%was supervised for less than a year. Only 11% of the parole population was assigned active supervision periods that met or exceeded three years.

Impacts on Criminal Justice Policy

Considering the timing of active supervision when calculating parole recidivism rates can paint a more precise picture of the immediate impacts of parole; however, such a system of measurement may have negative impacts upon the day-to-day operations of parole boards as they supervise offenders. As theorized by Ostermann (2011a), within this sort of accountability model, program resources can be used to incapacitate parolees in the community with the primary goal of working

cases towards discharge rather than rehabilitating them. This likely shakes out during the practice of supervising parolees if officers transfer problem cases from programming resource to programming resource in an effort to keep them under supervision and out of prison. Since these are problem cases, many of them are likely to eventually fail, but, as our findings indicate, this failure likely occurs after the parolee's discharge from parole supervision.

By keeping parolees in programs (many of which are residential in nature and therefore likely to reduce time at risk for reoffending), the parole board is able to identify the parolee as a successful case and the community program is able to claim that services were rendered. However, these successful cases and the rendering of these rehabilitative services do not translate into long-term successes for parolees. These individuals are likely to have future involvement with the criminal justice system, experience new stays in prison, and likely new stints on parole (because their prior stints were "successful"), where this process starts anew. While it may be argued that the goals of incapacitation and rehabilitation are not mutually exclusive within these sorts of programmatic approaches, if parole boards are primarily concerned with meeting successful discharge dates, and both parole terms are short and community program stays are relatively long (e.g., most programs are a mandatory 90 to 180 days in the jurisdiction in which our study was conducted), the value of programs will likely be more associated with incapacitative rather than rehabilitative effects by parole boards. Under this sort of model, community programs can become more akin to parole jails rather than rehabilitative resources.

Our results point to some potential policy directions that should be explored. First, studies that endeavor to examine recidivism rates for returning offenders or the impact that parole has upon reoffense patterns should make efforts to incorporate the time of active supervision into their analyses. The results from this research demonstrated that when the time of active supervision is not considered in the analyses, many former inmates who were at one time released to parole and failed in the community would have been considered parole "failures" if the active supervision term was not considered. This is an important finding and future research should investigate these issues in different jurisdictions. Future national-level recidivism studies should attempt to gather data about active supervision periods for parolees if one of the goals of the research is to contrast parole reoffense patterns with those of inmates who are unconditionally released.

More importantly, the underlying policies and practices of parole boards as they attach parolees to residential community programs as well as the programs that render services to parolees should be further investigated and audited. Only considering parole failures to be valid if the case is under active parole supervision likely paints a more accurate picture of the impacts of parole, but it also presents ample opportunities for parole boards to inflate success rates if these are the standards to which they are held. They must be held to a higher standard that includes long-term impacts upon the reoffense patterns of those they previously supervised.

Parole boards should likely be held responsible for the actions of those they previously supervised. This term of post-supervision responsibility must be evidence-based and reasonable. Future research should explore this concept as well as attendant rewards and sanctions for parole boards that can first aim for and then achieve this policy goal. This will potentially ensure that parole boards work towards using their resources to attempt to solve the problem of criminal behavior rather than shifting cases into and out of services in order to meet a discharge date. This study demonstrated that a rearrest occurred, on average, about nine months after the culmination of supervision for parolees who were successfully discharged and subsequently rearrested. A preliminary suggestion for a parole board's post-supervision responsibility term, then, could be between six months and a year.

The parole board within our study context engages in a regular auditing process of the community programs with which it contracts. However, this process generally entails ensuring that the program is in compliance with the contract that has been set forth by the parole board. It does not involve an investigation into the level to which the services rendered at the programs coincide with established principles that have been proven to reduce criminal offending. To that end, contracts between parole boards and community service providers should be investigated and augmented so that they incorporate requirements for vendors that are in line with evidence-based findings from the criminological literature. Conducting Correctional Program Assessment Inventory or Correctional Program Checklist assessments can likely enhance the current auditing practices of parole boards (Lowenkamp, Latessa, & Smith, 2006). These instruments provide the capacity to conduct empirically based assessments of the services offered to our criminal justice-involved populations as well as the program's capacity to deliver these services effectively. If the results from these sorts of assessments are accepted by parole boards and acted upon through the training of staff and the reconfiguration of programming resources, perhaps the time of active supervision can be more meaningful for former inmates released to parole and we can greater realize long- rather than short-term positive impacts upon recidivism rates.

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